COMMONWEALTH of VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
PERMIT
TO WITHDRAW GROUNDWATER
(FOR USE IN GROUNDWATER MANAGEMENT AREAS)

Permit Number: GW0044001
Effective Date: January 1, 2014
Expiration Date: December 31, 2023

Pursuant to Section 62.1-256 of the Ground Water Management Act of 1992 (Chapter 25, Title 62.1 of the Code of Virginia) and the Ground Water Withdrawal Regulation (9 VAC 25-610-10 et seq.), the STATE WATER CONTROL BOARD hereby authorizes

Permittee City of Virginia Beach

Address Municipal Center – Building 21
2408 Courthouse Drive
Virginia Beach, Virginia 23456

Facility Kempsville Greens Golf Course

to withdraw and use groundwater in accordance with this permit and the application received March 12, 2012 and subsequently amended.

The permittee is authorized to withdraw **21,000,000** gallons during the 10 year permit term.

The permittee shall comply with all requirements contained on this cover page, Part I - Permit Standards, Limitations, and Conditions, Part II - Special Conditions, the Ground Water Management Act of 1992 (Chapter 25, Title 62.1 of the Code of Virginia), and the Ground Water Withdrawal Regulation (9 VAC 25-610-10 et seq.). Nothing in this permit or this regulation shall be construed to relieve the permittee of the duty to comply with all applicable Federal and State statutes and regulations.

The permitted withdrawal will be used to supplement the onsite ponds for the purpose of supplying irrigation water to the golf course and landscaping. Other beneficial uses are not authorized by this permit.

Any noncompliance with permit conditions, the Ground Water Withdrawal Regulation 9 VAC 25-610-10 et seq.) or the Ground Water Management Act of 1992 (Chapter 25, Title 62.1 of the Code of Virginia) is a violation of the regulation and law, and is grounds for enforcement action, permit termination, revocation, amendment, or denial of a permit renewal application.

By direction of the STATE WATER CONTROL BOARD, this Permit is granted by:

Signed _____ Date 12/30/13
For the STATE WATER CONTROL BOARD

Part I
Permit Standards, Limitations. and Conditions

1. The withdrawal of groundwater shall originate from the following withdrawal points:

Owner Well Name	DEQ Well #	Depth	Aquifer	Latitude	Longitude
TW-1	228-00437	75'	Upper Yorktown-eastover	36° 49' 24.8"	76° 08' 22.4"
TW-2:	228-00438	82'	Upper Yorktown-eastover	36° 49' 20.5"'	76° 08.9' 45.7"

2. Withdrawals from the well system are limited as follows:

   In a calendar month: Total pumpage from these wells shall not exceed **2,300,000** gallons. The permittee shall report any amount in excess of the monthly withdrawal limit by the fifth day of the month following the month of over withdrawal.

   In a calendar year: Total pumpage from these wells shall not exceed **10,460,000** gallons. The permittee shall report any amount in excess of the annual withdrawal limit by the fifth day of the month following the month of exceeding this limit.

3. Water use from each well and total system water use shall be recorded daily and reported on forms provided by the Department of Environmental Quality (Department) to the Central Office of the Department by the tenth day of each January, April, July and October for the respective previous standard quarter. Records of water use shall be maintained by the permittee as required in Section 9 VAC 25-610-130.F of the Ground Water Withdrawal Regulation.

4. Permitted users shall install in-line totalizing flow meters to read gallons, cubic feet, or cubic meters on each well prior to beginning the permitted use. Meters shall be tested in accordance with American Water Works Association (AWWA) Manual M-6, "Water Meters - Selection, Installation, Testing, and Maintenance". Such meters shall produce volume determinations within plus or minus 10% of actual flows. A defective meter or other device must be repaired or replaced within 30 days. A defective meter is not grounds for not reporting withdrawals. During any period when a meter is defective generally accepted engineering methods shall be used to estimate withdrawals and the period during which the meter was defective must be clearly identified in groundwater withdrawal reports.

5. Each permitted well shall be equipped in a manner such that water levels can be measured during pumping and non-pumping periods without dismantling any equipment. Any opening for tape measurement of water levels shall have an inside diameter of 0.5 inches and be sealed by a removable plug or cap. The permittee shall provide a tap for taking raw water samples from each permitted well.

6. The permittee shall not place a pump or water intake device lower than the top of the uppermost confined aquifer that a well utilizes as a groundwater source or lower than the bottom of an unconfined aquifer that a well utilizes as a groundwater source.

7. Each well that is included in this groundwater withdrawal permit shall have affixed to the well casing, in a prominent place, a permanent well identification plate that records the Department of Environmental Quality well identification number, the groundwater withdrawal permit number, the total depth of the well and the screened intervals in the well, at a minimum. Such well

identification plates shall be in a format specified by the Department and are available from the Department.

8. Those portions of the Water Conservation and Management Plan described in the application received March 12, 2012 that are attached hereto as Attachment A and and as subsequently amended ("Conservation Plan") are incorporated into this permit. Requirements in the Conservation Plan shall have the same effect as any condition contained in this permit and may be enforced as such. Records of activities conducted pursuant to the Conservation Plan are to be submitted to the Department upon request. Revisions by the permittee to the Conservation Plan shall not be cause to amend this permit unless such revisions would alter the basis for the conditions of this permit found in Part II, paragraphs 1 and 3, of this permit or affect the permittee's ability to comply with such conditions. Any amendments to the Conservation Plan shall be provided to the Department's Central Office.

9. A new permit application must be submitted 270 days before the expiration date of this permit.

10. A new permit application must be submitted 270 days prior to any proposed modification to this permit that will result in an increase of withdrawal above permitted limits or violate the terms and conditions of this permit.

11. This permit may be reopened for amendment, transfer, or revocation as described in Part 6 of the Ground Water Withdrawal Regulation.

12. The permittee must notify the Department in writing and obtain staff approval of any change in the status, construction or pump setting of wells included in this permit. A revised GW-2 form must be submitted to the Department within 30 days in the event that the physical construction of a well is altered or the pump setting in the well is changed.

13. The permittee must notify the Department in writing of any change of contact person, address, or phone number that is contained in the application received March 12, 2012.

14. Upon presentation of credentials the Board or Department, or any duly authorized agent, shall have the power to enter, at reasonable times and under reasonable circumstances, any establishment or upon any property, public or private, located anywhere in the Commonwealth for the purposes of obtaining information, conducting surveys or inspections, or inspecting wells and springs to ensure compliance with any permits, standards, policies, rules, regulations, rulings and special orders which the Board or Department may adopt, issue or establish to carry out the provisions of the Ground Water Management Act of 1992 and the Ground Water Withdrawal Regulation.

Part II
Special Conditions

1. Water Conservation and Management Plan

The WC&M Plan, as described in the application received March 12, 2012 and subsequently amended, is incorporated into this permit and included as Attachment A. Requirements in the Mitigation Plan and subsequent revisions shall have the same effect as any condition contained in this permit and may be enforced as such.

2. Water Conservation and Management Evaluation Report

The permittee shall submit an Annual Water Conservation and Management Evaluation Report of estimated water savings achieved as a result of water conservation and management. The report shall include an evaluation of water savings achieved to include but not limited to the following:

a) The volume of water savings achieved from irrigation system efficiency and water conservation management that includes at a minimum; irrigation equipment efficiency, mandatory use reductions (when applicable) and irrigation scheduling to reduce evapotranspiration losses.

The Water Conservation and Management Evaluation report shall be submitted to the Central Office of the Department by the 31st of each January for the respective previous year.

3. Mitigation Plan

The Mitigation Plan, as described in the application received March 12, 2012 and subsequently amended, is incorporated into this permit and included as Attachment B. Requirements in the Mitigation Plan and subsequent revisions shall have the same effect as any condition contained in this permit and may be enforced as such. Revisions to the Mitigation Plan shall, however, not be cause to amend this permit unless such revisions would alter the basis for the conditions of this permit or or affect the permittee's ability to comply with such conditions. Any amendments to the Mitigation Plan shall be provided to the Department's Central Office.

4. Pump Intake Settings

Pump settings in individual wells are limited as follows:

Owner Well Name (or #)	DEQ Well#	Max Pump Setting (ft below land surface)
TW-1	228-00437	65
TW-2	228-00438	43

The permittee may provide additional information regarding the depth of the top of the (Upper Yorktown-eastover) Aquifer to justify pump settings different from those listed above. Any change in the pump settings must receive prior approval by staff of the Department of Environmental Quality and be included in this permit as a minor amendment.

5. Permit Reopener

This permit may be reopened if the issuance of groundwater withdrawal permits required by the Ground Water Management Act of 1992 for existing permitted users indicates that the basis used for predicting compliance with regulatory drawdown criteria was inaccurate.

ATTACHMENT A

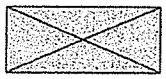
CONSERVATION PLAN

ATTACHMENT B

MITIGATION PLAN

ATTACHMENT A

WATER CONSERVATION AND MANAGEMENT PLAN



Permit Part 13

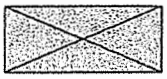
Water Conservation and Management Plan

Need for Conservation

Water conservation is a conscious effort by a water user to reduce water usage. This effort can defer development of new resources and reduce the cost of future water service. Every gallon of water not used is one less to be stored, purified, pumped and distributed. It may also represent one less gallon that has to be heated for washing or bathing, thus saving energy costs, or one less gallon of water that must pass through some form of wastewater conveyance system and treatment before it is returned to the environment.

Conservation of water has reached a new level of awareness. In some cases, conservation may represent a practical alternative to supply augmentation, or at least complement new supply augmentation projects until new technologies evolve to meet the needs of a growing population. Fresh water supplies, like other natural resources, are a limited commodity which must be managed wisely to preserve the well-being of future generations. Efforts to conserve existing supplies and the efficient allocation of water resources should be made at each stage of the water supply planning process.

Analyses have been conducted to project non-potable irrigation demands, identify possible surface and reuse water sources and determine the amount of reliable groundwater supply required. The projected demands presented in Permit Part 5 were developed based on the use of the conservation activities and course management strategies detailed in this Water Conservation and Management Plan. Irrigation of the golf course is from constructed ponds, fed by storm water and groundwater recharge, and supplemented by pumped groundwater. Pumped groundwater is needed only during peak irrigation demands and dry periods of little to no rainfall. Pumped groundwater is seasonal and is not needed during the winter months when irrigation is not necessary. During wet conditions pumped groundwater may not be needed at all as water levels in the ponds is maintained by stormwater contribution and irrigation demand is less. The maximum monthly withdrawals of pumped groundwater will only be required during extended periods of no rainfall.



Permit Part 13

Water Conservation and Management Plan

Regulatory Requirements

The Groundwater Management Act of 1992 (Chapter 25, Title 62.1 of the Code of Virginia) was approved in April 1992. It requires a Groundwater Withdrawal Permit for certain groundwater withdrawals within declared Groundwater Management Areas. Groundwater Withdrawal Regulations adopted in June 1993 (9 VAC 25-610-10 et seq.) require that applications for new Groundwater Withdrawal Permits include a water conservation plan approved by the Virginia Department of Environmental Quality, Division of Water. An approved conservation program must include:

- Use of water-saving plumbing and processes including, where appropriate, the use of water-saving fixtures in new and renovated plumbing as provided under the Uniform Statewide Building Code (USBC).
- A water loss reduction program.
- A water use education program.
- An evaluation of potential water reuse options.
- Requirements for mandatory use reductions during water shortage emergencies, including, where appropriate, ordinances prohibiting the waste of water generally.

Kempsville Greens is located within the Eastern Virginia Groundwater Management Area. As a result, the application for the proposed groundwater wells requires a water conservation plan.

Plan Objectives

The primary objective of this Water Conservation and Management Plan is to provide a documented, effective conservation and management strategy designed to minimize the demand for groundwater and to demonstrate compliance with the Groundwater Management Act of 1992. This plan consists of operational programs and strategies to be used in the daily

CONSERVATION MEASURES AND MANAGEMENT STRATEGIES

Kempsville Greens currently uses non-potable, untreated surface water drawn directly from on-site ponds for irrigation of tees, fairways, greens, and green banks. The on-site ponds are replenished by stormwater runoff and groundwater recharge. The ponds are designed to collect storm water runoff to the maximum extent possible. The existing on-site groundwater wells will be used only when necessary to maintain the pond operating level.

The specific water conservation measures and management strategies currently used at Kempsville Greens are presented here. The ultimate goal of these measures is to minimize the need for and use of pumped groundwater.

Water Saving Plumbing and Processes

The only use of groundwater will be for golf course irrigation. Careful design and knowledgeable attentive operation of a golf course irrigation system can reduce water use substantially from standard designs and operating practices of the past.

The sprinkler head layout on the course consists of a single and double row in fairways and single row heads on the greens and tees. The largest sprinkler head practical for the course layout is used. Large sprinkler heads and nozzles produce large water droplets, which reduces evaporation during the irrigation cycle by reducing the surface area of the sprayed water.

An automated irrigation control system provides flexibility in the operation of the irrigation system. Daily adjustments to irrigation schedules in response to rainfall, temperature, wind velocity and calculated evapotranspiration rates are made. The system allows small groups of sprinkler heads to be individually and precisely controlled in response to specific local irrigation requirements on the golf course. Flow meters on each individual well discharge will allow total irrigation water use and groundwater use to be separately monitored and tracked.

Turf types for the course playing surfaces are bentgrass for the greens, and Bermuda for the tees, fairways, and roughs. These turf types are currently in use on most courses in southeast Virginia with favorable results. After initial establishment, these turfs usually require 3/4 to 1 inch of water per week to maintain healthy growth. Actual irrigation requirements vary with soil types, shade, temperature, wind velocity, natural rainfall and course usage. Without natural rainfall, a golf course

constructed with these turf types typically requires an average of approximately ¾- inch of water per week, which is much less than popular fescue or bluegrass types.

Pond Level Management

To prevent overfilling the pond with pumped groundwater, a staff gauge will be placed at the stormwater outfall located at Pond 10. This outfall serves as the stormwater discharge point for Ponds 2 through 7 and 9 through 12, which are all interconnected on the course. The staff gauge will be set such that the water level below the bottom of the stormwater outlet can be directly measured.

Groundwater will be pumped only when the pond level drops to a point of 10-inches or more below the base of the stormwater outlet, as measured at the staff gauge. The groundwater then can be pumped, within the limits provided in the permit, to a point where the pond level is no higher than 6-inches from the base of the stormwater outlet. During the period that groundwater is pumped, pond level as measured at the staff gauge will be recorded on a daily basis, with the records maintained at the course for the duration of the permit. The water levels will be measured either by manually reading the value recorded on the staff gauge or with an automatic recorder installed adjacent to the staff gauge. A form for reporting manual measurements is attached.

WATER LOSS REDUCTION

For most golf course irrigation systems, the major operational expense is the power cost of the irrigation pumps. Because water lost in the irrigation pipe system through leaks increases pumping power costs, the prevention and elimination of system leaks is a priority of course maintenance personnel. The operation of all sprinkler heads will also periodically be visually checked, and any broken, leaking, or malfunctioning valves and sprinkler heads will be replaced. A supply of standard valves and sprinkler heads will be maintained either on-site or available for overnight delivery.

WATER USE EDUCATION

Wasteful or inefficient irrigation practices could negate the benefit gained in using turf grasses, trees and other plant materials with low water requirements. Continuing education in golf course irrigation and turf management methods is available through national organizations. The Golf Course Superintendents Association of America offers one-day training seminars for irrigation specialists and various specialty seminars including: Basic Principles of Turfgrass Management, Irrigation Scheduling Techniques, Irrigation Efficiency, and Turfgrass Stress Management. These seminars provide up-to-date information and techniques for increasing the efficiency and effectiveness of course irrigation and maintenance. Employees responsible for controlling the irrigation system will attend the appropriate continuing education seminars as required to maintain and update their knowledge of optimal irrigation and turf management practices.

WATER REUSE EVALUATION

The reuse of reclaimed water for golf course and landscape irrigation is becoming increasingly common in Florida and the Southwest Region of the United States. With appropriate levels of treatment and use controls in place, irrigation with reclaimed water is safe and beneficial. However, as explained in Permit Part 12, irrigation with reclaimed water is not viable for Kempsville Greens.

MANDATORY USE REDUCTIONS

Requirements for mandatory water use reductions during local or regional water shortage emergencies typically involve local ordinances which detail restrictions and penalties which may be applied during a declared water shortage emergency. Kempsville Greens is located within the City of Virginia Beach, however, the golf course irrigation system is an independent, non-potable system with no connection to the local water distribution system. As such, use restrictions imposed by the City do not apply to these systems. However, in the case of a water shortage emergency declared by the Director of DEQ, certain actions will be taken.

During a declared water shortage emergency the Golf Course will comply with the following mandatory use restrictions:

- Restrict irrigation of the course to the hours between 6 p.m. and 8 a.m.
- To the extent possible, irrigate the course only to maintain the soil moisture content just above the permanent wilting point of the various turfgrasses and plants in use on the course.
- Cease the operation of any ornamental fountain, except for fountains which are necessary for water quality maintenance in the on-site pond.
- Comply with all applicable restrictions imposed by the DEQ.

SUMMARY OF CONSERVATION PLAN

Conservation measures and strategies used in the operation and maintenance of the irrigation system can be summarized as:

- Periodic visual checks of system for leaks.
- Optimization of irrigation for individual sections of the golf course.
- Continuing education for golf course personnel.
- Water use reductions during declared water shortage emergencies.

The irrigation water needs are met by storm water fed ponds supplemented by pumped groundwater. The conservation measures and strategies summarized above will minimize the need for, and use of, pumped groundwater to maintain the pond level.

Kempsville Greens Golf Course
Pond Level Staff Gauge Readings

Month: _____

Day	Gauge Reading (ft)	Remarks
1		
2		
3		
4		
5		
6		
7		
8		
9		
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11		
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31		

Notes: Gauge Reading of _____ Corresponds to Pipe Invert
Pond Level Measurements Required Only During Groundwater Pumping

ATTACHMENT B

MITIGATION PLAN

Mitigation Plan Section 1

FILING AND INITIAL REVIEW OF CLAIM

Any Eligible Owner who believes that Kempsville Green's (Permittee's) withdrawals may have caused an adverse impact on his or her well may become a Claimant by submitting to Permittee a written request for mitigation of the Adverse Impact, reimbursement for costs of repairs, or both. To assure accurate assessments of any such Claim, it must be filed within 90 days of the time the Claimant determines that Permittee's withdrawals may have caused an Adverse Impact on his or her well. The Claimant shall allow Permittee, its employees and agents reasonable access to Claimant's property to obtain such information on the allegedly affected Well as is necessary to determine the merits of the Claim, including tests and inspections on the Well.

If the Claimant desires a temporary water supply or other interim relief, the Claim shall so indicate. If the Claimant has lost their only potable water supply, Permittee shall, upon request by the Claimant, provide an interim source of potable water supply of sufficient quantity for human consumptive use only to the Claimant within 72 hours of receipt of the Claim. At the Claimant's request, Permittee may, at Permittee's sole discretion, enter into an agreement with Claimant under which Permittee will provide or pay for a temporary water supply and/or investigate the cause of the alleged Adverse Impact on the Well. Costs incurred by Permittee shall be subject to reimbursement as provided in Section 4.0 of the Plan.

Within 5 business days after receipt of any Claim, Permittee will notify the Claimant in writing that it (a) agrees to consider the Claim or (b) needs additional documentation from the Claimant in order to respond to the Claim.

If Permittee agrees to consider the Claim, within 15 days of receipt of the claim, the Claimant will be notified in writing that Permittee (a) either agrees to mitigate claimed Adverse Impact and/or reimburse the Claimant or (b) denies the Claim. If Permittee agrees to mitigate the claimed Adverse Impact and/or reimburse the Claimant, Permittee will mitigate as soon as practicable and/or reimburse the Claimant within 10 days.

If Permittee denies the Claim, or any part thereof, the notice will:

- State the reasons the Claim, or any part thereof, was denied.
- Include a copy of the Plan.
- Advise the Claimant that he or she may seek resolution of the Claim by invoking the procedures set forth in Sections 2.0 and 3.0 of the Plan.

FILING AND INITIAL REVIEW OF CLAIM

Claim by invoking the procedures set forth in Sections 2.0 and 3.0 of the Plan.

Mitigation Plan Section 3

CLAIMS RESOLUTION PROCEDURES

If, after the filing and initial review of his or her Claim pursuant to Section 1.0 of the Plan, the Claimant finds Permittee's offer of mitigation or reimbursement to be inadequate, or Permittee informs the Claimant that Permittee will not mitigate the claimed Adverse Impact or reimburse the Claimant, the Claimant may accept Permittee's decision or may elect to pursue his or her Claim under the claims resolution procedures set out in this Section of the Plan ("Claims Resolution Procedures"). To pursue the Claim, the Claimant shall notify Permittee that he or she is initiating the disputed Claims Resolution Procedures of the Plan by referring his or her Claim to the Committee. At the same time, the Claimant shall identify a person qualified under Section 2.0 to serve as the Claimant's representative on the Committee.

Within 10 business days after receipt of such notice from the Claimant, Permittee shall identify its representative on the Committee, shall so notify the Claimant and Claimant's representative, and shall instruct the two representatives to select a third member within 10 business days.

Within 10 business days of the selection of its third representative, the Committee will establish a reasonable deadline for submission of all documentation it needs to evaluate the Claim. Both the Claimant and Permittee must abide by this deadline. The Committee will reach a decision on the Claim, by majority vote, within 15 business days after the claimant and Permittee have submitted all documentation the Committee needs to evaluate the Claim. The Committee shall take whatever steps it deems necessary to reach a decision, but the decision must be based on the standards set forth in Section 4.0 of the Plan.

If the Committee decides that the Claim qualifies for mitigation or reimbursement to any extent under the Plan, it shall approve the Claim to that extent and shall, within 5 business days, so notify the Claimant and Permittee, specifying in writing the reasons for its decision. Permittee will, as directed by the Committee, mitigate the claimed Adverse Impact as soon as practicable, and/or reimburse the Claimant within 10 business days for the amount awarded by the Committee.

If the Committee decides that the Claim does not qualify for mitigation or reimbursement under the Plan, it shall so notify the Claimant and Permittee, specifying in writing the reasons for the decision.

Mitigation Plan Section 4

STANDARDS FOR RESOLUTION OF CLAIMS

To qualify for mitigation of the claimed Adverse Impact or reimbursement of costs to repair the claimed Adverse Impact, the Claimant must provide evidence satisfactory to the Committee:

- That the Claimant is the owner of the Well.
- That the Well was legally in existence and lawfully operating as of the Date of the Plan; or, in the case of seasonal or intermittent operation, was lawfully operated within 6 months before or after that date; or, with respect to agricultural or drought relief wells, such other date determined by the Committee as necessary to avoid abrogation of documented, lawful groundwater rights; and was lawfully operating as of the date of making the Claim under the Plan (unless when the Claim was made the Well was inoperable as a result of the claimed Adverse Impact); or the well and withdrawals were permitted or certificated and all conditions in such certificate or permit or otherwise imposed by law to establish groundwater rights have been satisfied prior to the Date of the Plan.
- That, based on information compiled and information presented by the Claimant and/or Permittee, and any other inquiries the Committee, Claimant or Permittee chooses to undertake, the claimed Adverse Impact was more likely than not caused by Permittee's withdrawals.
- That the costs of any Repairs undertaken prior to initiation of the disputed Claims resolution process as described in Section 2.0 of the Plan were necessary and reasonable.

As to a claimed Adverse Impact on Historic Yield, there shall be a rebuttable presumption that Permittee's withdrawals <u>are</u> more likely than not the cause of the claimed Adverse Impact if the Claimant demonstrates that the allegedly impacted Well is screened in the Yorktown aquifer and the Well is located in the area of impact as shown on the impact area maps for the aquifer(s) in which the Well is screened. There shall be a rebuttable presumption that Permittee's withdrawals <u>are not</u> the cause of the claimed Adverse Impact on Historic Yield or Historic Beneficial Uses, if the Well is not screened in the Yorktown aquifer or the Well is located outside the area of impact as shown on the impact area maps for the aquifer(s) in which the Well is screened.

PLAN ADMINISTRATION AND NOTICE

The Committee may, in its discretion, request that Permittee assist it in administrative, accounting and clerical actions required under the Plan.

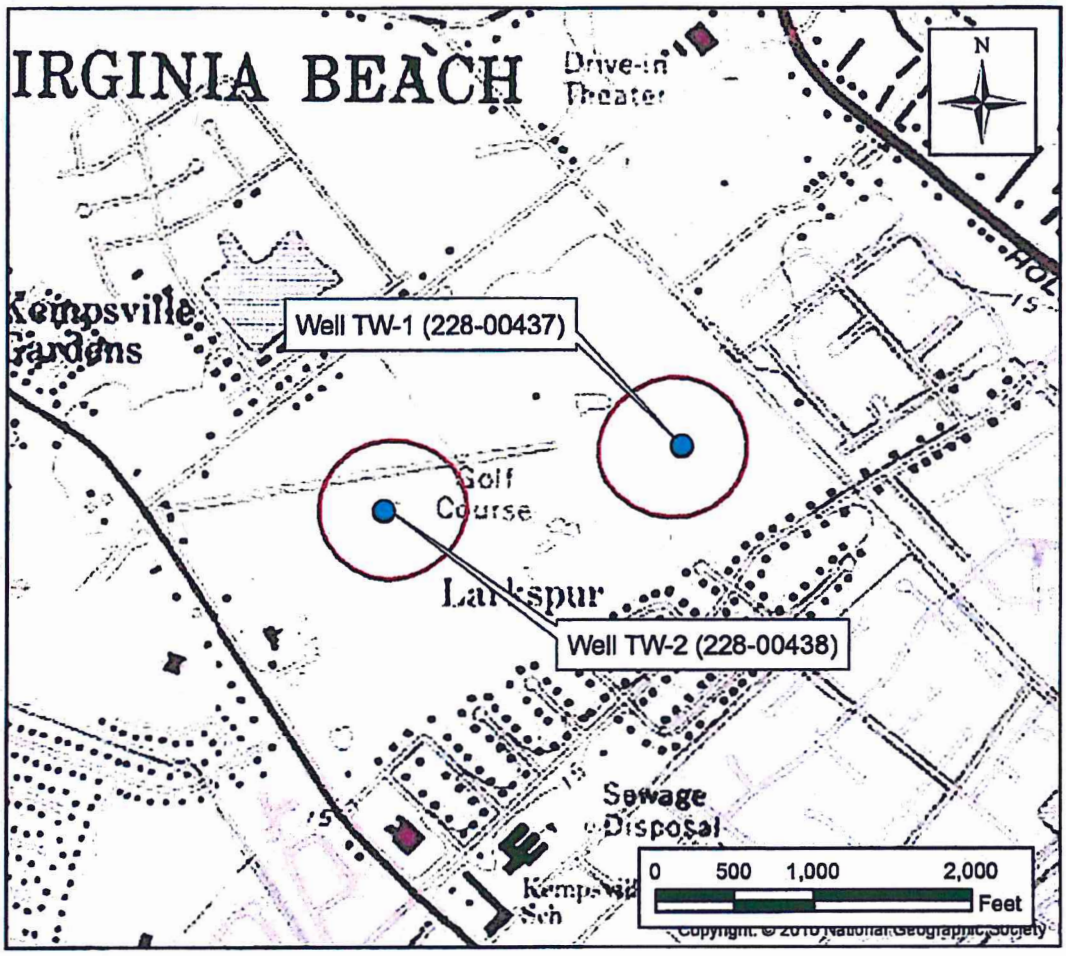
Any notice required under the Plan may be served by hand or certified mail. Notice to Permittee shall be addressed to:

Department of Parks and Recreation
Municipal Center- Building 21
2408 Courthouse Dr
Virginia Beach, Virginia 23456
Attn: Golf Course Administrator

The Plan is intended to provide a relatively speedy and low-cost means of fairly resolving Claims of Adverse Impact attributed to Permittee's withdrawals. All remedies and procedures under the Plan are in addition to those otherwise provided by law. Use of the process established by the Plan shall not be a prerequisite to filing the Claim respecting alleged damage from Permittee's withdrawals in a court of competent jurisdiction. Costs incurred by either party in implementing the Plan, including without limitation the cost of interim water supplies, costs of investigation and costs of well repair or remediation, may be included in Claims brought before a court of competent jurisdiction.

The Department of Environmental Quality (DEQ) and its Staff have no responsibility for the case-by-case administration of the Plan, but nothing in the Plan shall prevent DEQ Staff from providing information needed for the resolution of specific matters before the Committee, at its request and their discretion.

Kempsville Greens Golf Course
Area of Impact - Columbia Aquifer



Kempsville Greens Golf Course Wells

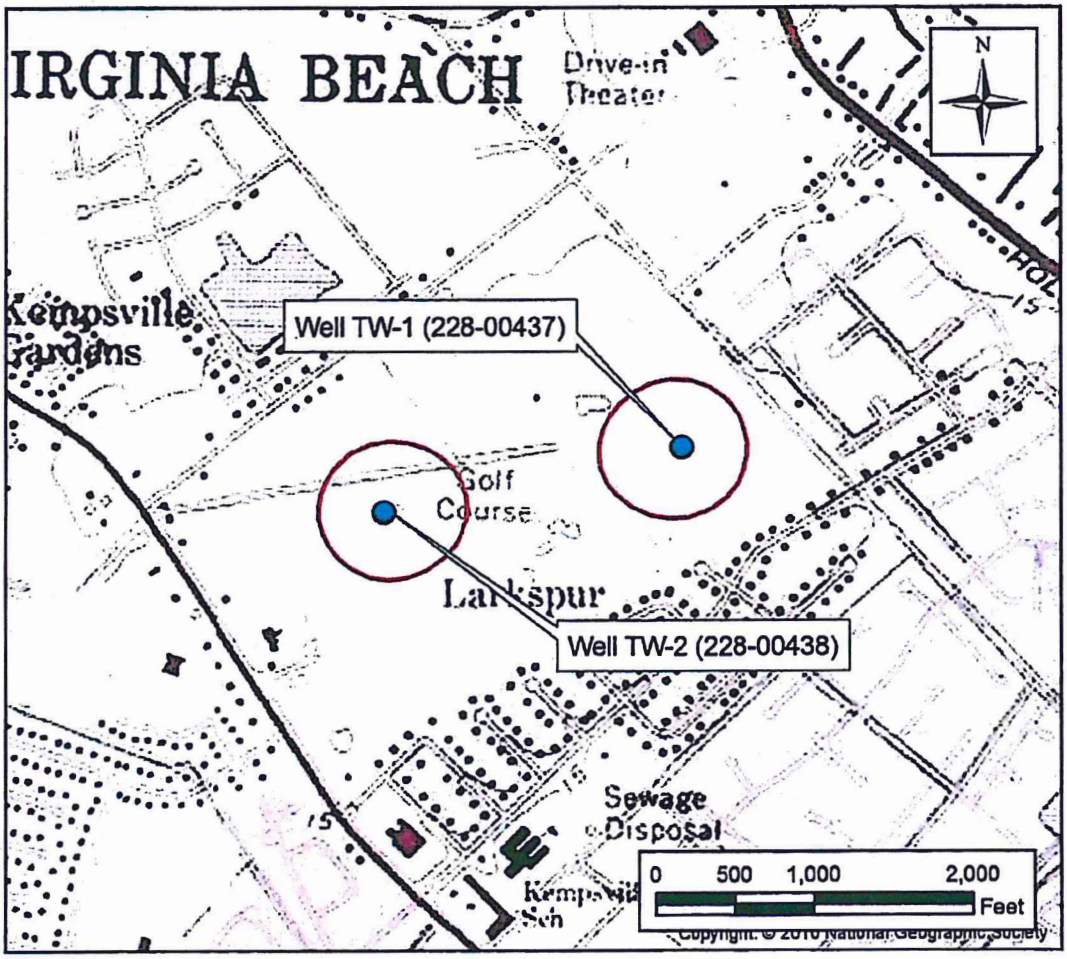
Area of Impact

Area of impact for the Columbia aquifer assumed to be coincident with the Area of Impact determined by analytical simulation of the Yorktown aquifer at this site. Tests indicated some degree of connection between the Columbia and Yorktown aquifers but data was insufficient to quantify. Maximum radius of one-foot drawdown (Area of Impact) for the Columbia aquifer is assumed to occur no more than 535 feet from the each pumping well.

Technical Evaluation performed by Aquaveo, LLC for the Virginia DEQ, Office of Surface and Ground Water Supply Planning July 22, 2013

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Kempsville Greens Golf Course
Area of Impact - Yorktown-Eastover Aquifer



Kempsville Greens Golf Course Wells

Area of Impact

Simulated drawdown at or exceeding one foot in the Yorktown-Eastover aquifer resulting from a 2-dimensional Hantush-Jacob (1955) simulation of 1 year at the maximum yearly rate of 10,460,000 gallons per year followed by 4.6 months at the maximum monthly rate of 2,300,000 gallons per month from the Yorktown-Eastover aquifer. Maximum radius of one-foot drawdown (Area of Impact) occurs 535 feet from the each pumping well.

Technical Evaluation performed by Aquaveo, LLC for the Virginia DEQ, Office of Surface and Ground Water Supply Planning July 22, 2013

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY